

REMARKS

In response to the Office Action mailed March 15, 2004, Applicants respectfully request reconsideration. To further the prosecution of this application, each of the rejections set forth in the Office Action is addressed below and amendments have been made in the claims. The claims as presented are believed to be in allowable condition.

Claims 1-28 are pending in the application, of which claims 1, 11, and 19 are independent. Claims 1-8, 10-12, and 14-28 stand rejected. Claims 9 and 13 have been deemed to recite allowable subject matter. In this amendment, claims 1 and 11 have been amended to clearly distinguish over the cited art. No new matter has been added.

I. Rejection of Claims Under 35 U.S.C. §102(e) Over Chin

In ¶5 of the Office Action, claims 1-3, 7, 8, 10, 19, 20, 23-24, 26 and 28, including independent claims 1 and 19, are rejected under 35 U.S.C. §102(e) as allegedly being anticipated by U.S. Patent No. 6,000,020 ("Chin"). Without acceding to the correctness of the Examiner's analysis of the cited reference, Applicants have amended claim 1 to clearly distinguish over Chin. The rejection of independent claim 19 and its associated dependent claims is respectfully traversed.

a. Claim 1

Claim 1 has been amended to recite a computer system comprising a network that couples a plurality of primary storage devices to a secondary storage device to permit one of the primary storage devices to access the secondary storage device through the network without using any of one or more communication links that couple the storage domain to the host domain *so that communication between the plurality of primary storage devices and the secondary storage device can occur over the network simultaneously with communication between the host domain and the storage domain through the one or more communication links*. This amendment is supported in the present application, e.g., at page 20, lines 18-24, and at page 24, lines 6-16.

Chin is directed to a system comprising a primary loop 10 and a secondary loop 26 coupled by a bridge 28 (Fig. 1). The primary loop 10 carries traffic between transaction server

16 and hard disk drive banks 12 and 14 (Col. 2, lines 56-60). The secondary loop 26 carries traffic between mirrored storage hard disk drive banks 32 and 34 and backup/archival storage devices 38 and 40 (Col. 2, line 56 – Col. 3, line 2; Fig. 1). Write transactions occur between transaction server 16 and hard disk drive banks 12 and 14 (Col. 6, line 55 – Col. 7, line 39). When a write transaction has been completed, the transaction server 16 performs a mirrored write transaction of the same data to the mirrored storage hard disk drive banks 32 and 34 via the bridge 28 (Col. 7, lines 40-43; Col. 6, lines 54-55). The write transaction to the mirrored storage hard disk drive banks 32 and 34 occurs in the same fashion as the original write transaction to the hard disk drive banks 12 and 14 on the primary loop 10 (Col. 8, lines 42-46). Thus, for every write transaction to the primary memory (i.e., hard disk drive banks 12 and 14), the transaction server 16 is programmed to carry out a mirrored write transaction of the same data to the mirrored memory (i.e., mirrored storage hard disk drive banks 32 and 34) by sending the same data written on the primary memory to mirrored memory via the bridge 28 (Col. 49, lines 36-52).

Chin does not disclose a computer system comprising a network that couples a plurality of primary storage devices to a secondary storage device to permit one of the primary storage devices to access the secondary storage device through the network without using any of one or more communication links that couple the storage domain to the host domain so that communication between the plurality of primary storage devices and the secondary storage device can occur over the network simultaneously with communication between the host domain and the storage domain through the one or more communication links. The hard disk drive banks 12 and 14 do not access the mirrored storage hard disk drive banks 32 and 34. In fact, the hard disk drive banks 12 and 14 and the mirrored storage hard disk drive banks 32 and 34 do not communicate with each other in any way. Rather, writes occur between transaction server 16 and hard disk drive banks 12 and 14, and mirrored writes occur between the transaction server 16 and mirrored storage hard disk drive banks 32 and 34. Thus, the system of Chin does not comprise a network that couples a plurality of primary storage devices to a secondary storage device so that communication between the plurality of primary storage devices and the secondary storage device can occur over the network simultaneously with communication between the host domain and the storage domain.

In view of the foregoing, it should be appreciated that Chin does not disclose a computer system comprising a network that couples a plurality of primary storage devices to a secondary storage device to permit one of the primary storage devices to access the secondary storage device through the network without using any of one or more communication links that couple the storage domain to the host domain so that communication between the plurality of primary storage devices and the secondary storage device can occur over the network simultaneously with communication between the host domain and the storage domain through the one or more communication links, as recited in claim 1. Accordingly, withdrawal of the rejection of claim 1 is respectfully requested.

Claims 2-11 and 26 depend from claim 1 and are allowable for at least the same reasons.

b. Claim 19

Claim 19 recites a method comprising a step of transferring data from at least one of a plurality of primary storage elements to a secondary storage element, the plurality of primary storage elements comprising a primary storage element that serves as primary non-backup storage for a host computer that is separate from and coupled to the primary storage element.

Chin does not disclose transferring data from at least one of a plurality of primary storage elements to a secondary storage element. Rather, as discussed above in connection with claim 1, data written to mirrored storage hard disk drive banks 32 and 34 is transferred from transaction server 16, and is not transferred from hard disk drive banks 12 and 14.

In view of the foregoing, it should be appreciated that Chin does not disclose a method comprising a step of transferring data from at least one of a plurality of primary storage elements to a secondary storage element, as recited in claim 19. Accordingly, withdrawal of the rejection of claim 19 is respectfully requested.

Claims 20-28 depend from claim 19 and are patentable for at least the same reasons.

II. Rejection of Claims Under 35 U.S.C. §103(a) Over Tamer in View of Misinai

In ¶9 of the Office Action, claims 11, 12, 14-18 and 27, including independent claim 11, are rejected under 35 U.S.C. §103(a) as being obvious over U.S. Patent No. 6,035,412 ("Tamer") in view of U.S. Patent No. 5,848,241 ("Misinai"). Without acceding to the correctness of the

Examiner's analysis of the cited reference, Applicants have amended claim 11 to clearly distinguish over the cited references.

Initially, Applicants point out that Tamer is commonly assigned with the present application. Pursuant to 35 U.S.C. §103(c), effective for applications (including continuing applications and continued prosecution applications) filed on or after November 29, 1999, subject matter which was prior art under former 35 U.S.C. §103 via 35 U.S.C. §102(e) now is disqualified as prior art against the claimed invention if that subject matter and the claimed invention "were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person" [MPEP §706.02(l)(1)]. Thus, if Applicants believed that claim 11 was rendered obvious by the combination of Tamer and Misinai, the rejection could be overcome by filing a continued prosecution application (CPA) or a continuing application. However, Applicants have not chosen that course of action because, as demonstrated below, it is believed that claim 11 clearly distinguishes over any combination of Tamer and Misinai.

Claim 11 has been amended to recite a computer system that comprises a heterogeneous plurality of host computers including at least a first host computer comprising a first platform and a second host computer comprising a second platform different from the first platform and a single backup controller capable of backing up data stored from both the first and second host computers on a plurality of primary storage devices to a secondary storage device, *wherein the data stored from the first host computer on the plurality of primary storage devices has a first format established by the first platform and the data stored from the second host computer on the plurality of primary storage devices has a second format established by the second platform.*

No combination of Tamer and Misinai discloses or suggests a single backup controller capable of backing up data stored in first and second formats established by host computers having first and second platforms, respectively. Misinai discloses a computer architecture wherein heterogeneous computer systems may share data items stored on an external device (Col. 2, lines 29-35; Col. 7, lines 41-44). Misinai discloses that such data sharing requires a controller of the type described in application serial number 08/579,721 (Col. 17, lines 60-66 of Misinai). The referenced controller stores shared data on a storage device in a common format

such that only one disk organization method (DOM) is used for the shared data (Col. 2, lines 11-20 of application serial number 08/579,721).

Thus, at most, Misinai would have motivated a person of ordinary skill in the art to modify the Tamer system to include heterogeneous computer systems that share data items stored in a single format on a data storage system. For example, if host processors 8 and 9 of Tamer were replaced with heterogeneous host processors and data storage system 4 of Tamer was modified to support data sharing by host processors 8 and 9 (although Applicants do not concede that there would have been any motivation to do so), data backed up from data storage system 4 to tape silo 12 would still have a common format, because all the data stored on data storage system 4 would have the common format taught by Misinai as the way of providing data sharing among heterogeneous hosts.

Therefore, the combined teachings of Tamer and Misinai do not teach or suggest a computer system as recited in claim 11, comprising a single backup controller capable of backing up data stored from first and second host computers on a plurality of primary storage devices to a secondary storage device, wherein the data stored from the first host computer on the plurality of primary storage devices has a first format established by the first platform and the data stored from the second host computer on the plurality of primary storage devices has a second format established by the second platform.

Thus, it is respectfully asserted that claim 11 patentably distinguishes over the prior art of record, such that the rejection of claim 11 should be withdrawn.

Claims 12-18 and 27 depend from claim 11 and are allowable for at least the same reasons.

III. Other Rejections of Dependent Claims

In ¶7 of the Office Action, claims 4, 5, 21, and 25 are rejected under 35 U.S.C. §103(a) as being obvious over Chin in view of U.S. Patent No. 5,680,580 ("Beardsley"). In ¶8 of the Office Action, claims 6 and 22 are rejected under 35 U.S.C. §103(a) as being obvious over Chin in view of Misinai.

Claims 4-6 and claims 21-22 and 25 depend from independent claims 1 and 19, respectively, and are believed to be allowable for at least the same reasons as the independent

claims. Accordingly, for the sake of brevity, Applicants believe that it is unnecessary at this time to individually argue the allowability of claims 4-6, 21-22, and 25 and reserve the right to specifically address the patentability these claims in the future, if deemed necessary.

Conclusion

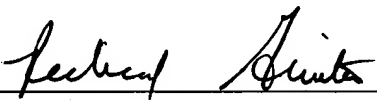
In view of the foregoing amendments and remarks, this application is believed to be in condition for allowance. A notice to this effect is respectfully requested. If the Examiner believes, after this response, that the application is not in condition for allowance, the Examiner is requested to call the Applicants' attorney at the number listed below to discuss any outstanding issues relating to the allowability of the application.

If this response is not considered timely filed and if a request for an extension of time is otherwise absent, Applicants hereby request any necessary extension of time. If there is a fee occasioned by this response, including an extension fee, that is not covered by an enclosed check, please charge any deficiency to deposit account No. 23/2825.

Respectfully submitted,

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